

5000

## RAW SEQUENCE LISTING

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/517,710  
Source: P4110  
Date Processed by STIC: 12/22/04

***ENTERED***



PCT

## RAW SEQUENCE LISTING

DATE: 12/22/2004

PATENT APPLICATION: US/10/517,710

TIME: 16:13:52

Input Set : A:\06056-0309PC-SEQLIST.TXT

Output Set: N:\CRF4\12222004\J517710.raw

```

4 <110> APPLICANT: Temple University - Of The Commonwealth System of Higher Education
6     Khalili, Kamel
8 <120> TITLE OF INVENTION: Method of Cell Growth Inhibition with
9     Agnoprotein
11 <130> FILE REFERENCE: 6056-309 PC
C--> 13 <140> CURRENT APPLICATION NUMBER: US/10/517,710
C--> 13 <141> CURRENT FILING DATE: 2004-12-10
13 <150> PRIOR APPLICATION NUMBER: US 60/388,019
14 <151> PRIOR FILING DATE: 2002-06-12
16 <160> NUMBER OF SEQ ID NOS: 28
18 <170> SOFTWARE: FastSEQ for Windows Version 4.0
20 <210> SEQ ID NO: 1
21 <211> LENGTH: 71
22 <212> TYPE: PRT
23 <213> ORGANISM: JC virus
25 <400> SEQUENCE: 1
26 Met Val Leu Arg Gln Leu Ser Arg Lys Ala Ser Val Lys Val Ser Lys
27 1           5           10           15
28 Thr Trp Ser Gly Thr Lys Lys Arg Ala Gln Arg Ile Leu Ile Phe Leu
29           20           25           30
30 Leu Glu Phe Leu Leu Asp Phe Cys Thr Gly Glu Asp Ser Val Asp Gly
31           35           40           45
32 Lys Lys Arg Gln Arg His Ser Gly Leu Thr Glu Gln Thr Tyr Ser Ala
33           50           55           60
34 Leu Pro Glu Pro Lys Ala Thr
35 65           70
38 <210> SEQ ID NO: 2
39 <211> LENGTH: 216
40 <212> TYPE: DNA
41 <213> ORGANISM: JC virus
43 <400> SEQUENCE: 2
44 atggtttcttc gccagctgtc acgtaaggct tctgtgaaag ttagtaaaac ctggagtgga 60
45 actaaaaaaaa gagctcaaag gattttaatt tttttgtag aatttttgct ggacttttgc 120
46 acaggtgaag acagtgtaga cgggaaaaaa agacagagac acagtgggtt gactgagcag 180
47 acatacagtg ctttgctga accaaaagct acatag 216
49 <210> SEQ ID NO: 3
50 <211> LENGTH: 71
51 <212> TYPE: PRT
52 <213> ORGANISM: JC virus
54 <400> SEQUENCE: 3
55 Met Val Leu Arg Gln Leu Ser Arg Lys Ala Ser Val Lys Val Ser Lys
56 1           5           10           15
57 Thr Trp Ser Gly Thr Lys Lys Arg Ala Gln Arg Ile Leu Ile Phe Leu

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/517,710

DATE: 12/22/2004

TIME: 16:13:52

Input Set : A:\06056-0309PC-SEQLIST.TXT

Output Set: N:\CRF4\12222004\J517710.raw

```

58          20          25          30
59 Leu Glu Phe Leu Leu Asp Phe Cys Thr Gly Glu Asp Ser Val Asp Gly
60          35          40          45
61 Lys Lys Arg Gln Lys His Ser Gly Leu Thr Glu Gln Thr Tyr Ser Ala
62          50          55          60
63 Leu Pro Glu Pro Lys Ala Thr
64 65          70
67 <210> SEQ ID NO: 4
68 <211> LENGTH: 71
69 <212> TYPE: PRT
70 <213> ORGANISM: JC virus
72 <400> SEQUENCE: 4
73 Met Val Leu Arg Gln Leu Ser Arg Lys Ala Ser Val Lys Val Ser Lys
74 1          5          10          15
75 Thr Trp Ser Gly Thr Lys Lys Arg Ala Gln Arg Ile Leu Ile Phe Leu
76          20          25          30
77 Leu Glu Phe Leu Leu Asp Phe Cys Thr Gly Glu Asp Ser Val Asp Gly
78          35          40          45
79 Lys Lys Arg Gln Arg His Ser Gly Leu Thr Glu Gln Thr Tyr Ser Ala
80          50          55          60
81 Leu Pro Glu Pro Lys Ala Thr
82 65          70
85 <210> SEQ ID NO: 5
86 <211> LENGTH: 71
87 <212> TYPE: PRT
88 <213> ORGANISM: JC virus
90 <400> SEQUENCE: 5
91 Met Val Leu Arg Gln Leu Ser Arg Lys Ala Ser Val Lys Val Ser Lys
92 1          5          10          15
93 Thr Trp Ser Gly Thr Lys Lys Arg Ala Gln Arg Ile Leu Ile Phe Leu
94          20          25          30
95 Leu Glu Phe Leu Leu Asp Phe Cys Thr Gly Glu Asp Ser Val Asp Gly
96          35          40          45
97 Lys Lys Arg Gln Lys His Ser Gly Leu Thr Glu Gln Thr Tyr Ser Ala
98          50          55          60
99 Leu Pro Glu Pro Lys Ala Lys
100 65          70
103 <210> SEQ ID NO: 6
104 <211> LENGTH: 71
105 <212> TYPE: PRT
106 <213> ORGANISM: JC virus
108 <400> SEQUENCE: 6
109 Met Val Leu Arg Gln Leu Ser Arg Lys Ala Ser Val Lys Val Ser Lys
110 1          5          10          15
111 Thr Trp Ser Gly Thr Lys Lys Arg Ala Gln Arg Ile Leu Ile Phe Leu
112          20          25          30
113 Leu Glu Phe Leu Leu Asp Phe Cys Thr Gly Glu Asp Arg Val Asp Gly
114          35          40          45
115 Lys Lys Arg Gln Lys His Ser Gly Leu Thr Glu Gln Thr Tyr Ser Ala

```

## RAW SEQUENCE LISTING

DATE: 12/22/2004

PATENT APPLICATION: US/10/517,710

TIME: 16:13:52

Input Set : A:\06056-0309PC-SEQLIST.TXT

Output Set: N:\CRF4\12222004\J517710.raw

```

116      50      55      60
117 Leu Pro Glu Pro Lys Ala Thr
118 65      70
121 <210> SEQ ID NO: 7
122 <211> LENGTH: 71
123 <212> TYPE: PRT
124 <213> ORGANISM: JC virus
126 <400> SEQUENCE: 7
127 Met Val Leu Arg Gln Leu Ser Arg Lys Ala Ser Val Lys Val Ser Lys
128 1      5      10      15
129 Thr Trp Ser Gly Thr Lys Lys Arg Ala Gln Arg Ile Leu Ile Phe Leu
130      20      25      30
131 Leu Glu Phe Leu Leu Asp Phe Cys Thr Gly Glu Asp Ser Val Asp Gly
132      35      40      45
133 Lys Lys Arg Gln Lys His Arg Gly Leu Thr Glu Gln Thr Tyr Ser Ala
134      50      55      60
135 Leu Pro Glu Pro Lys Ala Thr
136 65      70
139 <210> SEQ ID NO: 8
140 <211> LENGTH: 216
141 <212> TYPE: DNA
142 <213> ORGANISM: JC virus
144 <400> SEQUENCE: 8
145 atggttcttc gccagctgtc acgtaaggct tctgtgaaag ttagtaaaac ctggagtgga 60
146 actaaaaaaaa gagctcaaag gattttaatt tttttgtag aatttttgct ggatttttgc 120
147 acaggtgaag acagtgtaga cgggaaaaaa agacagaaac acagtgggtt gactgagcag 180
148 acatacagtg ctttgctga accaaaagct acatag 216
150 <210> SEQ ID NO: 9
151 <211> LENGTH: 216
152 <212> TYPE: DNA
153 <213> ORGANISM: JC virus
155 <400> SEQUENCE: 9
156 atggttcttc gccagctgtc acgtaaggct tctgtgaaag ttagtaaaac ctggagtgga 60
157 actaaaaaaaa gagctcaaag gattttaatt tttttgtag aatttttgct ggacttttgc 120
158 acaggtgaag acagtgtaga cgggaaaaaa agacagagac acagtgggtt gactgagcag 180
159 acatacagtg ctttgctga accaaaagct acatag 216
161 <210> SEQ ID NO: 10
162 <211> LENGTH: 216
163 <212> TYPE: DNA
164 <213> ORGANISM: JC virus
166 <400> SEQUENCE: 10
167 atggttcttc gccagctgtc acgtaaggct tctgtgaaag ttagtaaaac ctggagtgga 60
168 actaaaaaaaa gagcccaaag gattttaatt tttttgtag aatttttgct ggatttttgc 120
169 acaggtgaag acagtgtaga cgggaaaaaa agacagaaac acagtgggtt gactgagcag 180
170 acatacagtg ctttgctga accaaaagct aaatag 216
172 <210> SEQ ID NO: 11
173 <211> LENGTH: 216
174 <212> TYPE: DNA
175 <213> ORGANISM: JC virus

```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/517,710

DATE: 12/22/2004

TIME: 16:13:52

Input Set : A:\06056-0309PC-SEQLIST.TXT

Output Set: N:\CRF4\12222004\J517710.raw

```

177 <400> SEQUENCE: 11
178 atgggttcttc gccagctgtc acgtaaggct tctgtgaaag ttagtaaaac ctggagtgga 60
179 actaaaaaaaa gagctcaaag gatttttaatt tttttgtag aatttttgct ggacttttgc 120
180 acaggtgaag acagagtaga cgggaaaaaa agacagaaac acagtgggtt gactgagcag 180
181 acatacagtg ctttgctga accaaaagct acatag 216
183 <210> SEQ ID NO: 12
184 <211> LENGTH: 216
185 <212> TYPE: DNA
186 <213> ORGANISM: JC virus
188 <400> SEQUENCE: 12
189 atgggttcttc gccagctgtc acgtaaggct tctgtgaaag ttagtaaaac ctggagtgga 60
190 actaaaaaaaa gagctcaaag gatttttaatt tttttgtag aatttttgct ggacttttgc 120
191 acaggtgaag acagtgtaga cgggaaaaaa agacagaaac acagagggtt gactgagcag 180
192 acatacagtg ctttgctga accaaaagct acatag 216
194 <210> SEQ ID NO: 13
195 <211> LENGTH: 71
196 <212> TYPE: PRT
197 <213> ORGANISM: Artificial Sequence
199 <220> FEATURE:
200 <223> OTHER INFORMATION: JCV agnoprotein consensus sequence
W--> 202 <221> NAME/KEY: VARIANT
203 <222> LOCATION: 45
204 <223> OTHER INFORMATION: Xaa=Ser or Arg
W--> 206 <221> VARIANT
207 <222> LOCATION: 53
208 <223> OTHER INFORMATION: Xaa=Lys or Arg
W--> 210 <221> VARIANT
211 <222> LOCATION: 55
212 <223> OTHER INFORMATION: Xaa=Ser or Arg
W--> 214 <221> VARIANT
215 <222> LOCATION: 56
216 <223> OTHER INFORMATION: Xaa=Gly or None
W--> 218 <221> VARIANT
219 <222> LOCATION: 57
220 <223> OTHER INFORMATION: Xaa=Leu or None
W--> 222 <221> VARIANT
223 <222> LOCATION: (58)...(58)
224 <223> OTHER INFORMATION: Xaa=Thr or None
W--> 226 <221> VARIANT
227 <222> LOCATION: (59)...(59)
228 <223> OTHER INFORMATION: Xaa=Glu, Gln or None
W--> 230 <221> VARIANT
231 <222> LOCATION: (60)...(60)
232 <223> OTHER INFORMATION: Xaa=Gln or None
W--> 234 <221> VARIANT
235 <222> LOCATION: (61)...(61)
236 <223> OTHER INFORMATION: Xaa=Thr, Arg, Lys or None
W--> 238 <221> VARIANT
239 <222> LOCATION: (62)...(62)

```

## RAW SEQUENCE LISTING

DATE: 12/22/2004

PATENT APPLICATION: US/10/517,710

TIME: 16:13:52

Input Set : A:\06056-0309PC-SEQLIST.TXT

Output Set: N:\CRF4\12222004\J517710.raw

```

240 <223> OTHER INFORMATION: Xaa=Tyr or None
W--> 242 <221> VARIANT
243 <222> LOCATION: (63)...(63)
244 <223> OTHER INFORMATION: Xaa=Ser or Gly
W--> 246 <221> VARIANT
247 <222> LOCATION: (71)...(71)
248 <223> OTHER INFORMATION: Xaa=Thr or Lys
W--> 250 <400> 13
251 Met Val Leu Arg Gln Leu Ser Arg Lys Ala Ser Val Lys Val Ser Lys
252 1 5 10 15
253 Thr Trp Ser Gly Thr Lys Lys Arg Ala Gln Arg Ile Leu Ile Phe Leu
254 20 25 30
W--> 255 Leu Glu Phe Leu Leu Asp Phe Cys Thr Gly Glu Asp Xaa Val Asp Gly
256 35 40 45
257 Lys Lys Arg Gln Xaa His Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ala
258 50 55 60
259 Leu Pro Glu Pro Lys Ala Xaa
260 65 70
263 <210> SEQ ID NO: 14
264 <211> LENGTH: 74
265 <212> TYPE: PRT
266 <213> ORGANISM: BK polyomavirus
268 <400> SEQUENCE: 14
269 Met Phe Cys Glu Pro Lys Asn Leu Val Val Leu Arg Gln Leu Ser Arg
270 1 5 10 15
271 Gln Ala Ser Val Lys Val Gly Lys Thr Trp Thr Gly Thr Lys Lys Arg
272 20 25 30
273 Ala Gln Arg Ile Phe Ile Phe Ile Leu Glu Leu Leu Leu Glu Phe Cys
274 35 40 45
275 Arg Gly Glu Asp Ser Val Asp Gly Lys Asn Lys Ser Thr Thr Ala Leu
276 50 55 60
277 Pro Ala Val Lys Asp Ser Val Lys Asp Ser
278 65 70
281 <210> SEQ ID NO: 15
282 <211> LENGTH: 66
283 <212> TYPE: PRT
284 <213> ORGANISM: BK polyomavirus
286 <400> SEQUENCE: 15
287 Met Val Leu Arg Gln Leu Ser Arg Gln Ala Ser Val Lys Val Gly Lys
288 1 5 10 15
289 Thr Trp Thr Gly Thr Lys Lys Arg Ala Gln Arg Ile Phe Ile Phe Ile
290 20 25 30
291 Leu Glu Leu Leu Leu Glu Phe Cys Arg Gly Glu Asp Ser Val Asp Gly
292 35 40 45
293 Lys Asn Lys Ser Thr Thr Ala Leu Pro Ala Val Lys Asp Ser Val Lys
294 50 55 60
295 Asp Ser
296 65
299 <210> SEQ ID NO: 16

```

RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/10/517,710

DATE: 12/22/2004  
TIME: 16:13:53

Input Set : A:\06056-0309PC-SEQLIST.TXT  
Output Set: N:\CRF4\12222004\J517710.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:13; Xaa Pos. 45, 53, 55, 56, 57, 58, 59, 60, 61, 62, 63, 71

## VERIFICATION SUMMARY

PATENT APPLICATION: US/10/517,710

DATE: 12/22/2004

TIME: 16:13:53

Input Set : A:\06056-0309PC-SEQLIST.TXT

Output Set: N:\CRF4\12222004\J517710.raw

L:13 M:270 C: Current Application Number differs, Replaced Current Application No  
L:13 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
L:202 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
L:206 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
L:210 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
L:214 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
L:218 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
L:222 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
L:226 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
L:230 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
L:234 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
L:238 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
L:242 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
L:246 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
L:250 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:13  
L:255 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:13 after pos.:32  
M:341 Repeated in SeqNo=13